

REMARKS

1. The Amendments and the Support Therefor

Six claims (9-14) have been canceled, six new claims (21-26) have been added, and claims 1, 16, and 18 have been amended to leave claims 1-8 and 15-26 in the application. No fees should be due for the new claims because they add no more claims (including independent claims) than those originally paid for. No new matter has been added by the amendments or new claims, which find support as follows:

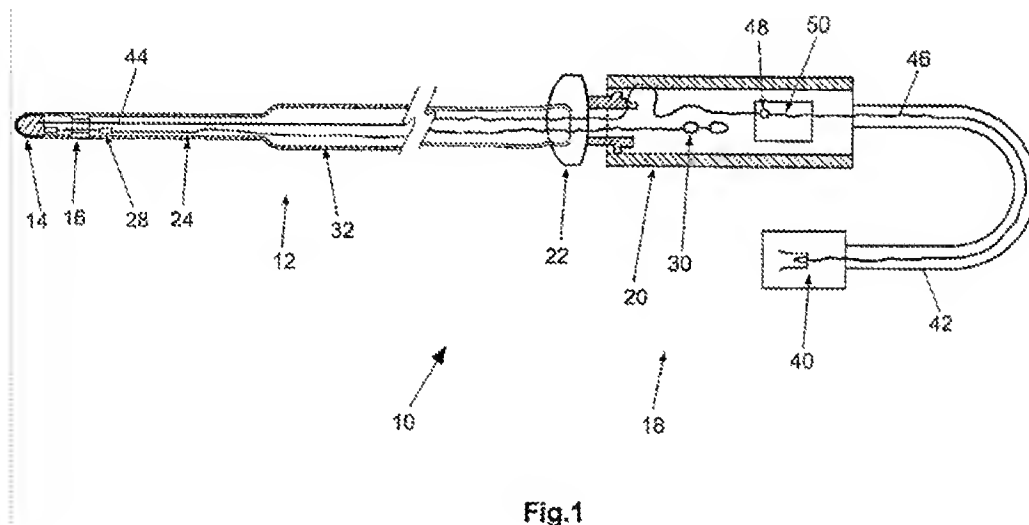
- *Independent claim 1* is amended to recite the matter of page 4, 2d paragraph and the final paragraph of page 9 (i.e., pars. [0014] and [0045] of corresponding US Publ'n. 2007/0100232);
- *Claims 16 and 18* are amended for clarification;
- *New claim 21* finds support in original claim 10;
- *New claim 22* finds support in the final paragraph of page 9 (i.e., pars. [0014] and [0045] of corresponding US Publ'n. 2007/0100232), featuring control member 28 and handle 22 of FIG. 1;
- *New claim 23* finds support in original claims 11 and 14;
- *New claim 24* finds support in original claim 13;
- *New independent claim 25* finds support in original claims 1-4, 15, and 18, as well as page 4, 2d paragraph and the final paragraph of page 9 (i.e., pars. [0014] and [0045] of corresponding US Publ'n. 2007/0100232), featuring control member 28 and handle 22 of FIG. 1;
- *New claim 26* finds support in original claim 10.

Further comments regarding the new claims are set out below at Section 8.

2. Election / Restrictions

The withdrawal of claim 19 is clearly erroneous, and claim 19 should be maintained in the application. Please refer to FIG. 1, which is part of elected Species I (FIGS. 1-4), as well as page 10, 3rd paragraph from the bottom onward of the present application (i.e., par. [0048] of corresponding US Publ'n. 2007/0100232 onward), noting FIG. 1's carbon fiber 44 crimped to metallic conductor 46 at crimp sleeve 48:

The tip electrode 14 is connected via an electrical conductor 44 made of carbon fibers to a typical electrical conductor 46 of the cable 42. The electrical conductor 44 made of carbon fibers extends from the tip electrode 14 up to a connection point within the holding part 20, which is made of a crimp sleeve 48 pushed onto the proximal end of the electrical conductor 44 made of carbon fibers and a small circuit board 50.



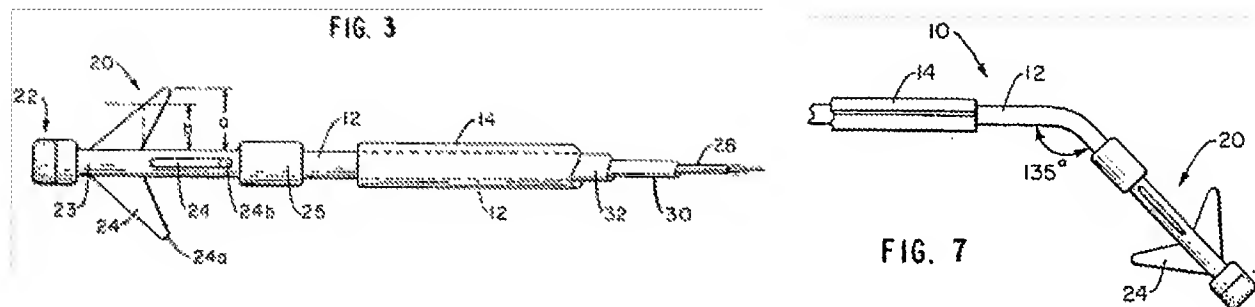
Claim 19 should therefore be reinstated, since it clearly encompasses the matter of elected Species I (FIGS. 1-4).

3. Rejection of Claims 9-14 under 35 USC §112(2)

Claims 9-14 are canceled, with similar new claims 21, 23, and 24 – which comply with §112(2) – being added in their place.

4. Rejection of Claims 1-5, 10, 11, and 13 under 35 USC §102 in view of U.S. Patent 4,721,118 to Harris

Independent claim 1 (and thus its dependent claims 2-5) is submitted to be novel, at least owing to its recitation that the distal length of the catheter (upon which the electrodes rest) is recited as being flexible and steerable, with a proximal area of the catheter being more rigid. In contrast, *Harris* has a flexible (proximally located) lead body 12 (see FIGS. 1, 3, and 7, column 3 line 10) distally terminating in a rigid body portion 23 bearing the electrode 22, and also bearing flexible fins 24 which can be folded about the body (as in FIG. 5):



Moreover, it would not be obvious for one of ordinary skill to modify *Harris* to attain the claimed invention because the *Harris* lead – which is used for pacemaker applications (column 1 lines 13-22) – needs to be snaked through the venous system to the heart (column 4 lines 57-61), and use of a rigid tip and flexible tail allow *Harris* to be used in this manner. In contrast, the claimed arrangement – which basically relates to a flexible tip and rigid tail – would not allow *Harris* to be used for its intended purpose. See MPEP 2143.01 (subsection entitled “The Proposed Modification Cannot Render The Prior Art Unsatisfactory For Its Intended Purpose”).

In summary, if *Harris* and the other art of record is objectively reviewed without prior knowledge of the invention (i.e., without hindsight), it is seen that the art neither teaches, nor leads one to, the invention claimed. Kindly withdraw the rejections.

5. Rejection of Claims 1-3, 6, 9, 10, and 15-18 under 35 USC §102 in view of U.S. Publ’n. 2004/0111141 to Brabec et al.

Kindly reconsider and withdraw these rejections. It appears *Brabec et al.* is misunderstood: this reference simply deals with a conventional stimulation catheter having electrodes *coated with carbon nanotubes* to increase the effective surface areas of the electrodes without increasing the “bulk areas” of the electrodes. Par. [0005] of *Brabec et al.* notes the problem of “polarization” arising from high impedance at the electrode/tissue interface. Par. [0006] of *Brabec et al.* notes that increasing the electrode surface area reduces polarization effects. Pars. [0034]-[0035] of *Brabec et al.*, and more generally the remainder of the specification, then note how it is the exposed electrodes which are to be coated with nanotubes to increase their surface areas. Note FIG. 2, which summarizes a coating process (discussed at par. [0041] onward), and FIGS. 3-5, illustrating nanotube-coated electrode surfaces (discussed at par. [0045] onward); see also claims 1 and 25. Thus, *Brabec et al.* does not disclose carbon conductors leading from the electrodes as recited in independent claims 1 and 15 (and thus in their dependent claims 2, 3, 6, and 16-18).

Moreover, claims 1 and 15 recite that the electrodes are situated on flexible portions of the catheters, with more rigid portions being more proximally located. This matter is not seen in the cited portions of *Brabec et al.*. If this matter is believed to be present in *Brabec et al.*, kindly clarify for the record where it is disclosed. “The factual determination of anticipation requires the disclosure in a single reference of every element of the claimed invention. . . . It is incumbent upon the examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference.” *Ex parte Levy*, 17 USPQ2d 1461, 1462 (Bd. Pat. App. & Int. 1990), *citing to Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick*, 221 USPQ 481 (Fed. Cir. 1984); see also 37 CFR §1.104(c)(2),¹ MPEP 707.07(d).

¹ “In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.”

6. Rejection of Claims 6-8, 14-17, and 20 under 35 USC §103 in view of U.S. Patent 4,721,118 to Harris

Independent claims 1 and 15 (and thus their dependent claims 6-8, 16, 17, and 20) are submitted to be unobvious in view of *Harris* for the reasons discussed in the foregoing Section 4 of this Response: modifying *Harris* to meet claims 1 and 15, and to have a flexible distal tip and more rigid proximal section, would be contrary to *Harris*' purposes, since *Harris* needs its electrode-bearing rigid distal body portion 23, proximally followed by the flexible lead body 12, in order to be effectively snaked through the venous system to be anchored in the heart.

7. Rejection of Claims 4, 5, 7, 8, 11-14, 17, and 20 under 35 USC §103 in view of U.S. Publ'n. 2004/0111141 to Brabec et al. and U.S. Patent 4,721,118 to Harris

These claims are submitted to be allowable for at least the same reasons as their parent claims. Further, if the references are fully considered for all they suggest, it cannot fairly be said that an ordinary artisan would contemplate the claimed invention unless hindsight is used: *Brabec et al.* focuses on the use of nanotube-coated electrodes to increase the effective surface area of the electrodes, and combining this feature with those of *Harris* simply does not lead to the claimed invention.

8. New Claims 21-26

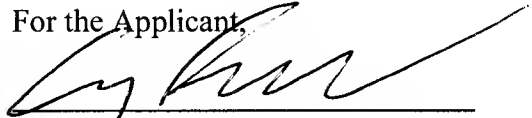
New claims 21-24 are submitted to be allowable for at least the same reasons as their parent claims. Additionally, without the benefit of hindsight, the art of record does not appear to show, or to lead one to conceive:

- an ablation electrode catheter having the features recited in claim 21 and its parent claim 1;
- a steerable electrode catheter having the features recited in claim 22 and its parent claim 1;
- electrotherapy methods as recited in claims 23 and 24;
- an electrode catheter having the features recited in claims 25 and 26.

9. In Closing

If any questions regarding the application arise, please contact the undersigned attorney. Telephone calls related to this application are welcomed and encouraged. The Commissioner is authorized to charge any fees or credit any overpayments relating to this application to deposit account number 18-2055.

For the Applicant,



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